MEETING SUMMARY

NIH Public Access Meeting with Science, Technical, and Medical Publishing Community Representatives

Wilson Hall, Building 1
National Institutes of Health
Bethesda, Maryland

July 28, 2004

Background and Introduction

(Dr. Lana Skirboll, Director, NIH Office of Science Policy, and Dr. Elias Zerhouni, NIH Director)

The NIH welcomed representatives of the science, technical, and medical (STM) publishing community to this open forum to discuss the issue of public access to research publications.

The mission of the National Institutes of Health (NIH) is to uncover new knowledge that will lead to better health for everyone. The sharing of ideas, data, and research findings is encouraged by the NIH as a primary mechanism for accomplishing this important public mission.

NIH-funded scientists are expected to share their ideas and discoveries through presentations at scientific meetings and other forums and publications in peer-reviewed journals. To this end, the NIH encourages its researchers and grantees to publish their work in venues that ensure high quality peer review and the greatest public access to their results.

The NIH has been considering the wide range of issues raised by public access for some time and has paid close attention to developments both within the United States and abroad. Fundamental changes in the scientific landscape and its quickening pace require easier modes of access to information.

The NIH is challenged with addressing fairly the needs of its various constituencies. It recognizes the need to retain several existing values inherent to the current publishing system, among these peer review and communities of science. The latter are often created through journal-publishing scientific societies and serve a vital purpose in stimulating interdisciplinary research. The agency invests in the current model through its grantees and grantee institutions (libraries) and will continue to do so.

However, the NIH mission is to conduct and support research that improves health and includes the dissemination of research information to the public. The arrival and quick evolution of the electronic age has spurred an increased public demand for information about health, medicine, and research. Nearly half of all Internet searching pertains to health-related issues, and, as a

result, patients are more educated and informed than in the past. Concurrently, the structure of the publishing industry has changed. Site licenses and electronic distribution of journal content have improved access for some investigators. But rising subscription prices and movement from print distribution have diminished access for scholars in smaller institutions and many of the lay public without rights to access the electronic holdings of major research libraries.

At the same time, the NIH must also serve its own needs for having reliable data readily at hand for the purposes of managing its diverse research portfolio and setting research priorities.

Thus, a balanced policy is required to meet these collective needs. In summary, any action or policy undertaken by the NIH must take into account the following two considerations:

- The public deserves better access to the NIH-funded research it has supported.

- For purposes of managing its research portfolio, and demonstrating and monitoring its productivity, the NIH needs a centralized, archived repository of research results obtained with NIH funds.

The NIH calls upon its various stakeholders to provide evidence and guidance that will assist the agency in its decision-making processes. All discussion will be taken into account, and after sufficient information has been gathered from all stakeholders, the NIH will post a draft policy inviting outside comment.

Thematic Summary

(Open discussion among meeting participants)

Transparency and Consultation

NIH should be transparent and consultative in making decisions about public access to NIH-funded research results. Meeting participants were generally pleased about NIH's stated concern about the matter and the fact that NIH had not yet chosen a model and associated action plan in response to the recently released Appropriations Committee language. Because NIH will likely set a precedent for other Federal agencies in developing public access policies, NIH will become best informed by acquiring the views of all stakeholder communities, including commercial publishers and professional societies, the scientific community ("authors"), and the public (including disease advocacy groups). There was a wide spectrum of attitudes, perceptions, experiences, and proposed solutions within the represented STM publishing community, many of whom had rather different definitions of the "status quo" within the realm of publishing as it relates to access to research results. However, most were in agreement that the status quo is unusually dynamic. Most participants predicted that the demand for public access would steadily increase, but some questioned the validity of the assumption that public access to the literature would unambiguously improve the dissemination of research results, or whether public access would have lasting gains on human health. Representatives present were eager to learn about the timing of NIH's plan to vet its draft policy among stakeholder constituencies.

Business Models

The STM publishing community members present at the meeting emphasized that many different business models exist within their industry. Readership and citation impact impart differential value to STM publications, and these factors may also influence the expected impact of a declining subscription base upon revenue streams. Many participants stated that various public access "experiments" and innovations are ongoing, and that establishing policy or issuing mandates before the outcomes and long-term effects of these experiments are known may be premature. Discussion centered on the relationship between valuation and financial responsibility; *i.e.*, various components of STM publications are provided by different entities (authors, journal and professional society staff). For example, the publication of interpretive, "front end," articles (news digests, feature stories about scientific areas and career trends) may have high value for the non-scientifically educated public, although the relevance will vary depending on the research (*e.g.*, basic *vs.* clinical/applied). Similarly, the publication of job advertisements within journals is useful and relevant to the research community. There was near unanimous agreement that the role of peer review within the STM publishing world is a highly valued component of the current system and one that serves an outside "validation" role of NIH and the research it supports.

Mandates

Several representatives of this stakeholder community expressed deep concern about the notion of the government controlling the marketplace. NIH responded to this concern noting that NIH does not wish to interfere with the natural efficiency of the market, and that the agency is very sensitive to this issue. In particular, NIH recognizes the high value afforded by publishers on the

overall publication process (*e.g.*, via peer review and the facilitation of information translation and transfer). Some meeting participants stated that the concept of mandated compliance may have unexpected, untoward effects such as denying access to authors who cannot pay (in the "author-pays" model), and the interference with successful business models. Of particular concern was the concept of issuing mandates prematurely, before the testing of alternate models of access to information have been adequately tested and vetted. Most expressed the view that if issued, any mandate should be carefully crafted to be flexible and reversible to the extent possible.

Public Demand

There is widespread agreement that the public's demand for free access to the results of research that its tax dollars finance is historically high and shows no evidence of waning. However, within the STM publishing community, there is not widespread agreement that increased public access to research results will either enhance the dissemination of research results or produce tangible gains in human health. Currently, no substantial body of evidence exists to support the success of any particular access model, and this contributes to the difficulty of reaching consensus on a suitable policy whose benefits outweigh costs across the user spectrum. While some parties believe that the standard practice of providing access to research abstracts *only* is entirely sufficient to satisfy the needs of non-scientifically educated members of the public, NIH has received input from other stakeholders (such as patient advocacy groups) contrary to this notion. Nonetheless, meeting discussion did solidify the concept that journals provide useful value beyond the dissemination of raw data by providing news, analysis, and interpretive articles more accessible to a lay reader.

PubMed Central and Manuscript Deposition

There was general agreement that publishing research findings was a necessary step of the scientific process, whether in journals, repositories, or both. Questions were raised concerning the adequacy and relevance of employing PubMed Central (PMC) as a repository for published manuscripts. Various issues of concern arose regarding responsibility/control of the submission process (*e.g.*, whether authors will regularly and reliably comply), the technical competency of PMC, and the present ambiguity of terminology (e.g., edited, accepted, manuscript, article, etc.). A potentially difficult issue is the matter of assuring that the deposited version of a manuscript is actually the definitive version, one that will not be further edited or altered. Some meeting participants questioned the notion of PMC being the sole repository, since other institutionally based repositories exist and could be used for the purpose, especially since some of these resources already house published manuscripts. NIH responded by voicing the concern that the lifetime of these repositories may not be guaranteed, potentially jeopardizing their use as a permanent, comprehensive archive of scientific information. Some participants stated that there is the unresolved question of what NIH-funded researchers want; should PMC be the only publisher of their data? Future discussions with that group of stakeholders will likely provide insight on this issue.

Timing of Public Access

While a substantial portion of published research is already available online, currently there is wide variability in the amount of time between publication and public access. Journals have

practices that range from immediate access to post-publication delays of a few months to a year or more. Currently, individual decisions by publishers about establishing time delays are affected by many factors including frequency of journal publication and the nature of the data reported, with various fields of research being differentially suited to the timing of public access. One participant stated that revenue and public access may not be inexorably linked; in this case, shortening the time delay to public access to a few months coincided with an increase in subscriptions. Some participants expressed relative comfort with the first portion of the Appropriations Committee language that stipulates depositing manuscripts into PMC 6 months after publication, stating (or knowing, if this is their current practice) that this time is likely sufficient to retain a viable subscription base. However, there was more concern regarding the second proposed Congressional mandate, which would require all NIH-funded studies to be openly accessible immediately upon publication. Others were unconcerned, predicting that implementing the recommendations proposed by the Appropriations Committee would pose little, if any, problem.

Consequences

Within the stakeholder group represented at this forum, there was wide variability of opinion regarding the practical aspects of public access. Most participants view the growing trend toward public access as an inevitability of the electronic age, but cautioned against adopting policies that may have unintended consequences. Those potential harms include journals going out of business (and the possible loss of archived scientific content) and biased access to publication for authors with limited research funds (in the "author-pays" model). Alternatively, some meeting participants predicted several positive outcomes of public access. Several entities embrace the idea fully and do not anticipate insurmountable difficulties in adapting current practices to public access as a workable strategy for all vested parties, including authors. Some representatives stated that the current STM publishing market is dysfunctional because demand for journals is price inelastic, due to the fact that cost is irrelevant at point of use and that one journal cannot readily substitute for another. Taking this into account, the public access trend may produce useful improvements such as price stabilization.

Conclusion and Next Steps

(Dr. Zerhouni)

Finding common ground among the government and its various stakeholder communities is a desirable endpoint. NIH is duly challenged with endorsing a policy on public access that will satisfy the agency's mandate to provide the public with better access to the results of Federally funded research, while preserving the integrity of the process of publishing and archiving scientific data. NIH seeks to identify solutions that will be least onerous to all parties involved, but due to the spectrum of opinions, needs, and deep-rooted established practices, accepting compromise will inevitably be part of any solution.

Additional meetings will be held to solicit the views of all stakeholder constituencies, in order to ascertain the pressure points for various communities. Within the near future, the NIH intends to publish a draft policy, either in the *Federal Register* or in the *NIH Guide for Grants and Contracts* (http://grants.nih.gov/grants/guide/index.html). The draft policy will present a clear description of the NIH's stance and future actions in the area of public access. There will be an ample, public comment period in which all parties are encouraged to express their views and concerns. After sufficient information has been gathered, the NIH will communicate with Congress about its consultations and proposed next steps.

Throughout the process of deciding on future policy, the NIH strongly values candor and openness. The NIH is committed to working collaboratively to promote scientific progress toward improving human health.

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Roster of Non-NIH Participants

Organization	Attendees
American Association for the Advancement of Science	Alan Leshner Publisher Beth Rosner
American Association of Anatomists	Alec Stone
American Chemical Society	Robert Bovenschulte
American Diabetes Association	Peter Banks
American Institute for Physics	Marc Brodsky
American Medical Association	Nawin Gupta Publisher, Journal of the American Medical Association
American Medical Publishers Association	Brian D. Crawford
American Physiological Society	Marty Frank Alice Raanan
American Psychological Association	Janet Soller
American Societies of Immunologists	Lauren Gross
American Society for Microbiology	Michael Goldberg, Executive Director Janet Shoemaker, Director, Public Affairs Office
American Society of Hematology	Jeff Coughlin
Annals of Internal Medicine	Robert Spanier Christine Laine
The American Society for Biochemistry and Molecular Biology	Judith Bond Peter Farnham Barbara Gordon
The American Society for Cell Biology	Elizabeth Marincola
Association of American Medical Colleges	Tony Mazzaschi

Association of American Publishers	Pat Schroeder Barbara Meredith
Association of American Universities	Pat White John Vaughn
The British Medical Journal Publishing Group (BMJ USA component)	Douglas Kamerow
Cell Press	Lynne Herndon Kevin Hurley
Current Science	Melissa Parker Director of Marketing
Federation of American Societies for Experimental Biology	Paul Kincade Mark Sobel Gary Kline
Medical Research Division Lippincott, Williams and Williams	F. Hill Slowinski
New England Journal of Medicine	Christopher Lynch Vice President for Publishing
Ornithological Council	Ellen Paul
Oxford Press	Janet Boullin Journals Editorial Director
Proceedings of the National Academy of Sciences	Nick Cozzarelli
Public Library of Science	Vivian Siegel Executive Director
Rittenhouse Book Distributors	Meg White
Scientist Magazine	Paula Park
Society for Neuroscience	Barbara Goldman
Scholarly Publishing & Academic Resources Coalition (SPARC)	Rick Johnson
The Endocrine Society	Lenne Miller